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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,892

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Dieter Hermeling

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EXAMINER

BERNSHTEYN, MICHAEL

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

04/03/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,892	Applicant(s) HERMELING ET AL.	
	Examiner MICHAEL M. BERNSHTEYN	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-12 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>04/02/2007</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1-8 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable as obvious over Anchor et al. (U.S. Patent 5,478,883).

With regard to the limitations of claims 1-8 and 10-12, Anchor discloses an improved emulsion polymerization process utilizing at least one substantially water-insoluble ethylenically unsaturated monomer is provided for forming discrete solid polymeric particles suitable for use in coating and/or adhesive applications. During at least the initial portion of the polymerization a dissolved water-soluble polymerizable surfactant (as defined) formed by the reaction of a **diallylamine**, **ethylene oxide**, and **propylene oxide** and/or butylene oxide additionally is provided in the reaction zone in the continuous aqueous phase. The water-soluble polymerizable surfactant undergoes copolymerization and is substantially completely consumed during the course of the emulsion polymerization. The emulsion polymerization is carried out on a stable basis, there is no need to attempt to remove a surfactant at the conclusion of the emulsion polymerization, and the resulting polymeric particles are particularly well suited for coating and/or adhesive end uses where they form stable films and exhibit improved adhesion characteristics (abstract, Example 1, col. 7, line 42 through col. 9, line 20).

The water-soluble polymerizable ethylenically unsaturated surfactant undergoes copolymerization with other ethylenically unsaturated monomer present in said reaction zone and is substantially completely consumed during the course of the emulsion polymerization. The ethylenically unsaturated monomer or monomers which may be polymerized or copolymerized in accordance with the improved emulsion polymerization process of the present invention are well known in the art and are exemplified hereafter in a representative manner. For instance, suitable ethylenically unsaturated monomers are represented by, but not restricted to, mono- and polyunsaturated hydrocarbon

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monomers, vinyl esters (e.g., vinyl esters of C₁ to C₆ saturated monocarboxylic acids), vinyl ethers, monoethylenically unsaturated mono- and polycarboxylic acids and their alkyl esters (e.g., acrylic acid esters and methacrylic acid esters, particularly their C₁ to C₁₂ alkyl, and more particularly their C₁ to C₄ alkyl esters), the nitriles, vinyl and vinylidene halides, amides of unsaturated carboxylic acids, and amino monomers (col. 2, line 66 through col. 3, line 21).

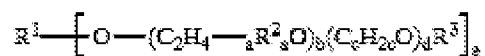
The formed acrylic latex utilizing the specifically defined polymerizable surfactant derived from diallylamine, ethylene oxide, and propylene oxide exhibits superior electrolytic stability, coagulum, and water sensitivity values (col. 12, lines 51-55).

Although Anchor does not disclose the claimed compound of general formula (I), an obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties.” *In re Payne*, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 979). See *In re Papesch*, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) (discussed in more detail below) and *In re Dillon*, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1991) (discussed below and in MPEP § 2144) for an extensive review of the case law pertaining to obviousness based on close structural similarity of chemical compounds. See also MPEP § 2144.08, paragraph II.A.4.(c).

2. Claims 1-8 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gruning et al. (U.S. Patent 6,268,521) in view of Witteler et al. (U.S. Patent Application Publication 2003/0091602)

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With regard to the limitations of claims 1-8 and 10-12, Gruning discloses a process for enzymatic preparation of acrylic esters and/or methacrylic esters of polyoxyalkylenes, and to the use thereof. The acryloyl and/or methacryloyl compounds of **polyoxyalkylenes** are obtainable by a process for esterifying or **transesterifying** acrylic and/or methacrylic acid or acrylic and/or methacrylic esters with a polyoxyalkylene of the general formula (I)



wherein R^1 is hydrogen, an e-valent, linear or branched, cyclic, unsaturated and/or aromatic hydrocarbon radical, an unsubstituted or substituted aromatic, a carbohydrate or a carbohydrate derivative; each R^2 is the same or different alkyl radicals or alkylene radicals having 1 to 24 carbon atoms or unsubstituted or substituted phenyl radicals having up to 24 carbon atoms; R^3 is a hydrogen radical or a monovalent organic radical; a is 0 to 3; b is 0 to 100; c is 2 to 1.2; d is 0 to 100; e is 1 to 30; the sum $(b+d)=4$ to 200; and wherein at least one OH group is present per molecule and the sequence of the polyoxyalkylene segments $(C_2H_4 - R^2_aO)_b$ and $(C_6H_{2c}O)_d$ is arbitrary, in the presence of an enzyme which catalyzes the esterification or transesterification (abstract, claim 1).

With regard to the limitations of claims 1-8 and 10-12, Gruning does not disclose the usage of amino compound.

Witteler discloses that particularly preferred **crosslinkers** are, for example, methylenebisacrylamide, **triallylamine** and triallylammonium salts, which have been reacted with **ethylene oxide** and/or **propylene oxide** (page 5, [0082]).

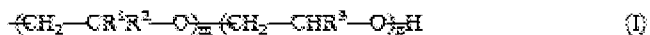
Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate amino compounds such as triallylamine as taught by Witteler in Gruning's acryloyl and/or methacryloyl compounds of polyoxyalkylenes because these compounds are particularly preferred as crosslinkers for different cosmetic formulations (US'602, page 5, [0012]), and thus to arrive at the subject matter of instant claim 1 and dependent claims 2-8 and 10-12.

3. Claims 1-8 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable as obvious over Andre et al. (U.S. Patent Application 2003/0143908).

With regard to the limitations of claims 1-8 and 10-12, Andre discloses a modification of surface properties of particulate, linear, sheet-like, or three-dimensional structures using alkoxylated polyvinylamines, novel alkoxylated polyvinylamines, and also a process for their preparation (abstract).

At least some of the polyvinylamine nitrogen atoms bear side chains of the formula I:

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[0011] where R^1 , R^2 , R^3 , m , and n are as follows:

[0012] R^1 is C_2 - C_{28} -alkyl, C_2 - C_{28} -alkenyl, C_6 - C_{16} -aryl, or C_7 - C_{16} -arylalkyl,

[0013] R^2 is hydrogen or methyl, in particular hydrogen,

[0014] R^3 is hydrogen or methyl,

[0015] m is an integer from 1 to 20, and

[0016] n is 0 or an integer from 1 to 100.

Suitable comonomers B are monoethylenically unsaturated monomers, in particular vinyl esters of saturated carboxylic acids having from 1 to 6 carbon atoms, such as vinyl formate, vinyl acetate, vinyl propionate, and vinyl butyrate. Other suitable comonomers B are ethylenically unsaturated C_3 - C_6 carboxylic acids, such as acrylic acid, methacrylic acid, maleic acid, crotonic acid, itaconic acid, and vinylacetic acid, and also the corresponding alkali metal and alkaline earth metal salts, esters, amides, and nitriles, for example methyl acrylate, **methyl methacrylate**, ethyl acrylate, and ethyl methacrylate (page 2, [0030]).

The obtained compounds are advantageously suitable for use in diapers, sanitary pads, cloths for cleaning, wiping or dishwashing, and serviettes, agricultural textiles, geotextiles, and also for filter applications (page 7, [0102]).

Although Andre does not disclose the claimed compound of general formula (I), an obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties." *In re Payne*, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 979). See *In re Papesch*, 315 F.2d 381, 137

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USPQ 43 (CCPA 1963) (discussed in more detail below) and *In re Dillon*, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1991) (discussed below and in MPEP § 2144) for an extensive review of the case law pertaining to obviousness based on close structural similarity of chemical compounds. See also MPEP § 2144.08, paragraph II.A.4.(c).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL M. BERNSHTEYN whose telephone number is (571)272-2411. The examiner can normally be reached on M-Th 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ling-Siu Choi/

/Michael M. Bernshteyn/

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Primary Examiner, Art Unit 1796

Examiner, Art Unit 1796

/M. M. B./

Examiner, Art Unit 1796